VIRGINIA DROUGHT MONITORING TASK FORCE

Drought Status Report

April 11, 2012

Statewide precipitation for the current water year, October 1, 2011 to March 31, 2012 is within the normal range (93% of normal). However, five of the thirteen drought evaluation regions (all within the eastern half of Virginia) have received less than normal precipitation during this period and are within either the watch or warning ranges:

- Northern Coastal Plain (watch: 73% of normal)
- York-James (warning: 61% of normal)
- Eastern Shore (watch: 72% of normal)
- Southeastern Virginia (warning: 65% of normal)
- Chowan (watch: 77% of normal)

Two adjacent regions are just within the normal range (Northern Virginia, 83%; and Northern Piedmont, 82%). The remaining regions (all within the western portion of Virginia) have received greater than 90% of normal precipitation over the current water year. Normal precipitation is defined as the mean precipitation for a thirty year period of record. Precipitation greater than 80% of the thirty-year mean is considered to be in the normal range for the October – March period with respect to drought response stages.

Appendix A contains precipitation tables for periods dating from January 1, 2011 through March 31, 2012 provided by the Climatology Office of the University of Virginia.

For the 2012 calendar year, precipitation has been below normal statewide at 75% of the normal amount. Only 4 of the 13 drought regions (Big Sandy, New River, Upper James, Middle James) received greater than 80% of normal precipitation for the January 1 – March 31, 2012 period. For the month of March, the statewide percent of normal precipitation was at 90%. However, there was a large disparity in rainfall between the western and eastern regions, with percent of normal in the eastern regions ranging from 51% to 75%.

As of April 11, 2012, the National Weather Service Climate Prediction Center 6-10 day climatologic outlooks call for above normal temperatures for the entire Commonwealth with above normal precipitation for the western half of the commonwealth and normal precipitation across the coastal plain. The 8-14 day outlooks call for above normal temperatures and normal precipitation across the state. The one-month and three-month outlooks call for slightly above normal temperatures and equal chances of below normal, normal and above normal precipitation statewide.

The April 3, 2012 U.S. Drought Monitor web pages indicate that abnormally dry (D0) conditions exist throughout southeastern Virginia, northern Accomack County, and most of the counties within northern Virginia and the Shenandoah Valley (Appendices B and C). The dryer-than-normal region encompasses approximately 37% of the Commonwealth. The Seasonal Drought Outlook for the United States for April 5 – June 30, 2012 forecasts that drought development is at present unlikely for most of the state, with the northern Eastern Shore (excluding Northampton County) delineated within an area marked as “drought to persist or intensify” (Appendix D).

The National Weather Service's Advanced Hydrologic Prediction Services (AHPS) web pages showing departures from normal rainfall over the past 30, 60 and 90 days indicate that the central, northern and eastern portions of Virginia have continued to receive lower than normal rainfall (Appendix E), with normal or above normal rainfall falling only upon the southwestern portion. The water-year departure from normal precipitation map indicates that the Eastern Shore, parts of the Shenandoah Valley, and the southeastern corner of Virginia have received significantly lower than normal rainfall since October 2011.

The Virginia Department of Health (VDH) reported that no public water-supply systems are under voluntary or mandatory water conservation requirements due to drought-related issues.

Reports from the Climatology Office of the University of Virginia, the United States Geological Survey and the Virginia Departments of Agriculture and Consumer Services and Environmental Quality follow.

Report from the Climatology Office of the University of Virginia

April 6, 2012

March brought widely varying amounts of precipitation across the Commonwealth. Generally speaking, the more southwestern regions received considerably more (in the normal or above range) than those more to the east. This left about of half of Virginia (seven regions) with below normal precipitation for the month—and five of those received only about half of normal.

In many respects, this repeats the spatial distribution of precipitation seen across the state for the winter months (December–February). In addition, temperatures have been exceedingly high. Averaged statewide this has been the warmest March on record (118 years).

This warmth has increased direct evaporation of moisture from the surface to above normal levels and continued to promote very early leaf-out and bloom for many plant species. In the absence of late freezes, 2012 might see an especially early start to the growing season. This is particularly applicable to the more eastern regions. The added moisture loss from plants, has led to very high drying rates for this time of the year. All these factors combined could set the stage for some future difficulties with moisture availability in the drier regions.

Virginia Statewide Average Winter Temperatures
For Winters of 1895-96 through 2011-12
Ranked By Warmest (Top 25)

Winter	Average Temperature °F	Rank Warmest
1931 - 1932	45.1	1
1948 - 1949	42.7	2
1949 - 1950	42.4	3
2011 - 2012	41.4	4
1956 - 1957	41.2	5
2001 - 2002	41.0	6
1990 - 1991	40.5	7
1998 - 1999	40.4	8
1951 - 1952	40.3	9
1932 - 1933	40.3	9
1912 - 1913	40.1	11
1997 - 1998	40.1	11
1952 - 1953	40.1	11
1908 - 1909	40.1	11
1936 - 1937	40.0	15
1973 - 1974	39.9	16
1991 - 1992	39.9	16
1971 - 1972	39.7	18
1929 - 1930	39.7	18
1953 - 1954	39.5	20
2007 - 2008	39.3	21
1938 - 1939	39.3	21
1996 - 1997	38.9	23
1974 - 1975	38.9	23
1918 - 1919	38.5	25
1920 - 1921	38.5	25
1924 - 1925	38.5	25

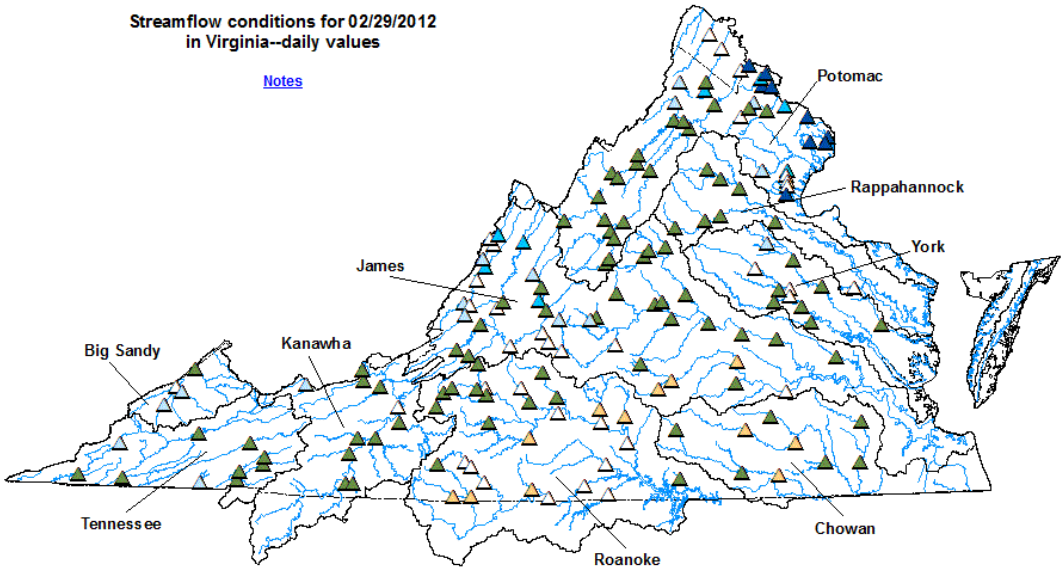
United States Geological Survey
Streamflow and Ground Water Levels

April 5, 2012:

Streamflows are below normal for a majority of the basins in the eastern half of Virginia in the Chowan, James, York, Rappahannock, and Potomac River Basins (fig. 1). Above normal streamflow conditions occur in the Kanawha, Tennessee, and Big Sandy River Basins. Below normal to moderate drought conditions for streamflow are now more prevalent in the eastern half of Virginia (fig. 2).

Groundwater levels (fig. 3) are predominantly in the normal range across Virginia. A majority of the wells in the normal range have levels that occur in the 25 to 50-percentile class (table 1). Below normal conditions continue to persist for observation wells located in the Roanoke and lower Eastern Shore areas. Groundwater levels soon will begin the spring/summer recession, when levels normally begin to decline into autumn. The onset of this recessional period at levels in the low normal (25 to 50-percentile class) could contribute to the persistence of below normal drought conditions for groundwater levels and streamflow conditions, especially in the eastern half of Virginia.

(*A*)



(*B*)

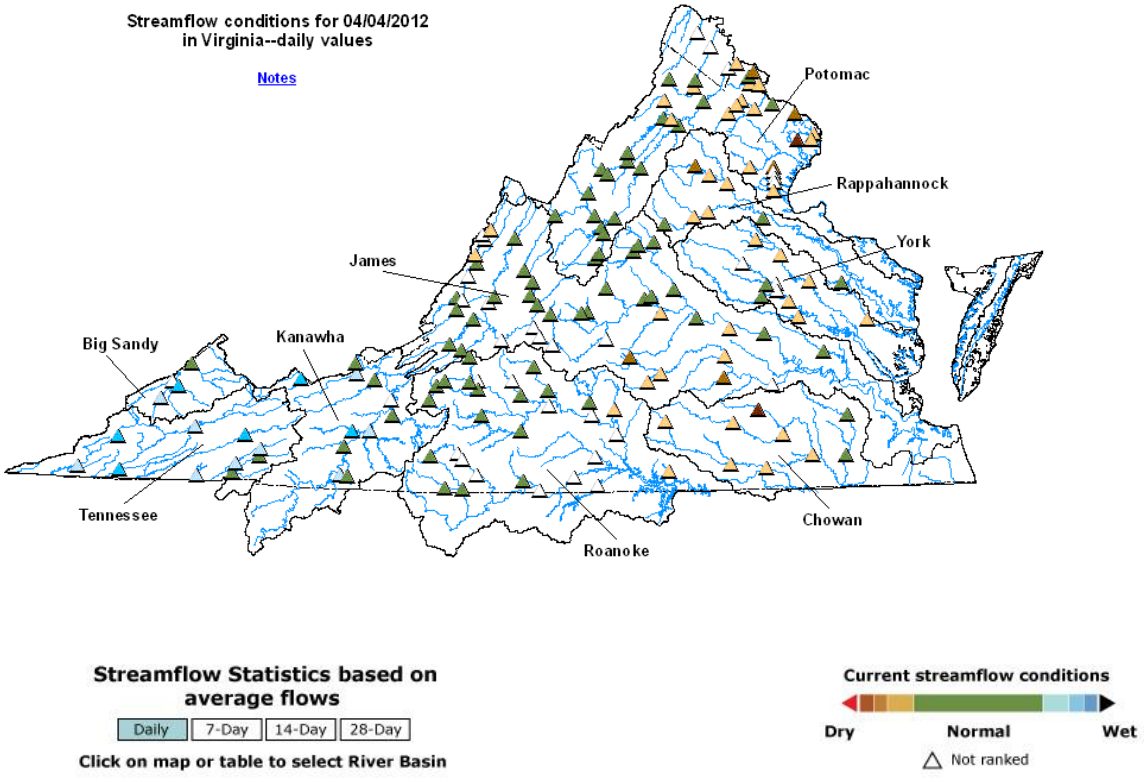


Figure 1. Streamflow conditions for (*A*) February 29, 2012 and (*B*) April 4, 2012 in Virginia.

(*A*)

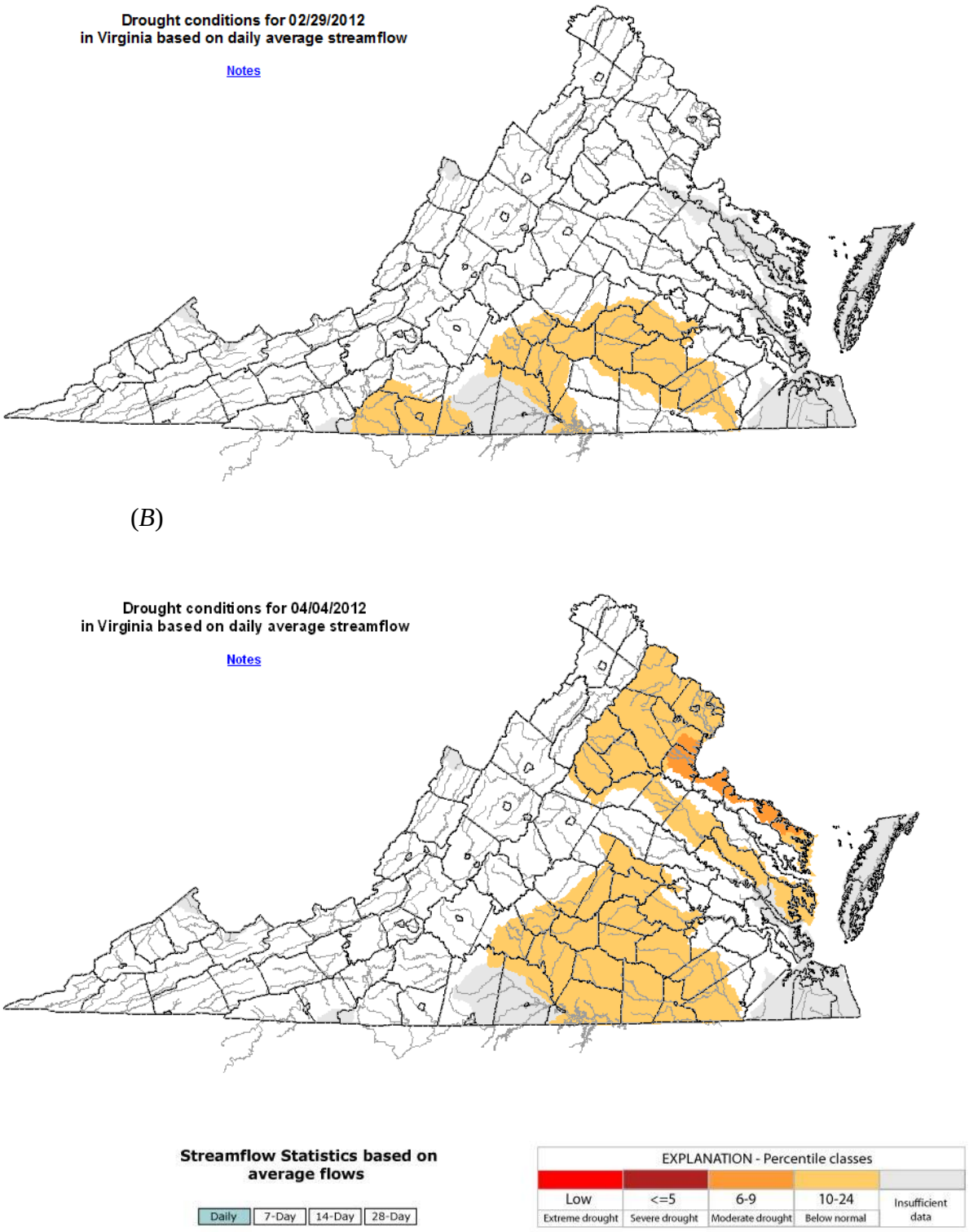
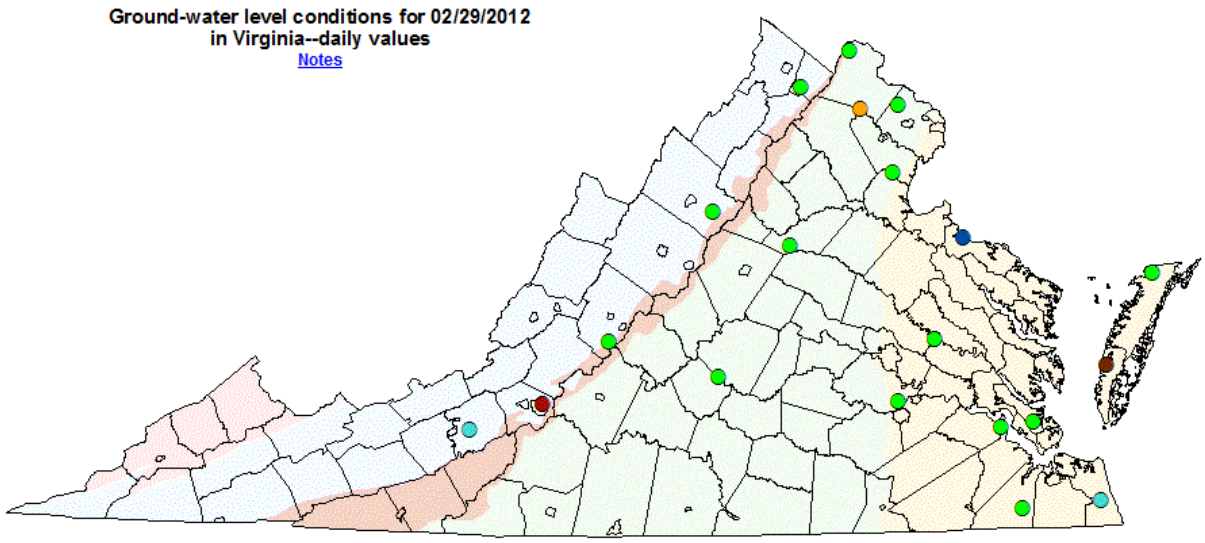
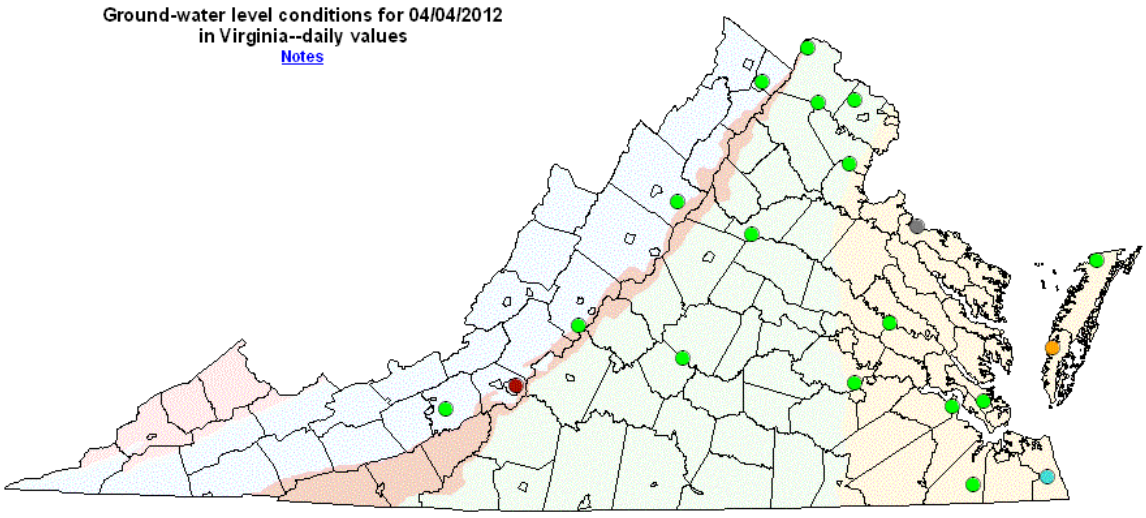


Figure 2. Drought conditions for (*A*) February 29, 2012 and (*B*) April 4, 2012 in Virginia.

(*A*)



(*B*)



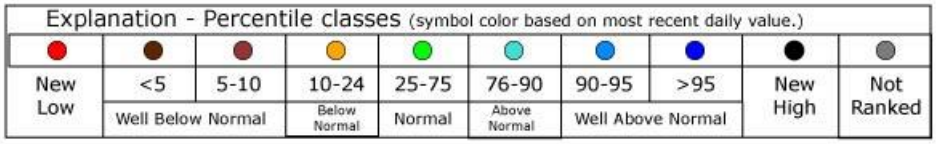


Figure 3. Groundwater-level conditions for (*A*) February 29, 2012 and (*B*) April 4, 2012 in Virginia.

Table 1. Current percentile classes for groundwater levels in the Virginia Climate Response Network.

[Light green shading indicates groundwater levels in the 25 to 50-percentile class. Dark green shading indicates groundwater levels in the 50 to 75-percentile class. Groundwater levels are classified as normal between the 25th and 75th percentiles.]

Map index	Site ID	Site name	Percentile class
1	363928076332901	58B 13	25-50
2	364126076003501	62B 1 SOW 098A	76-90
3	370712076413203	57E 13 SOW 094C	25-50
4	370812080261901	27F 2 SOW 019	50-75
5	370841076275204	59F 74 SOW 184C	25-50
6	371644077244601	51G 1	25-50
7	371653079552101	31G 1 SOW 008	25-50
8	372608078404601	41H 3	25-50
9	372705075555903	63H 6 SOW 103A	10-25
10	373737077083201	53K 19 SOW 080	50-75
11	373758079271601	35K 1 SOW 063	50-75
12	375723075344404	66M 19 SOW 110S	50-75
13	381002078094201	45P 1 SOW 030	25-50
14	381132076551001	55P 9	25-50
15	382150078424001	41Q 1	25-50
16	383423077245901	51S 7	25-50
17	385607077381101	49V 1	25-50
18	385638077220101	52V 2D	25-50
19	390348078035501	46W175	25-50
20	391542077423801	49Y 1 SOW 022	25-50

STATUS OF AGRICULTURAL DROUGHT

Virginia Department of Agriculture and Consumer Services

April 2012

According to the USDA Crop Weather Report released on April 1, 2012, 84% of topsoil moisture ranged from adequate to surplus. Most regions of the state are reporting sufficient rainfall and spring planting is underway. The unusually warm weather coupled with regular rainfall has allowed growers to prepare their fields for planting earlier than normal. Small grains and strawberries are well ahead of schedule and many growers have begun planting corn. Strawberry growers have expressed concern that "pick-your-own" customers are not aware that the berries are ripening two to three weeks earlier than normal due to the milder weather. Growers are worried that customers will not visit berry farms until the season is almost over. Growers are also concerned that the potential for a heavy frost still exists and could damage berries and fruit trees.

The mild weather has also allowed producers to put their livestock out to pasture earlier than normal. Producers still have feed from last season and have begun to store it.

Virginia Department of Environmental Quality
Conditions of Major Drought Indicator Reservoirs

April 11, 2012:

Four large multi-purpose reservoirs are identified as drought indicators in the *Virginia Drought Assessment and Response Plan* (Plan); Smith Mountain Lake, Lake Moomaw, Lake Anna and Kerr Reservoir. All four of these reservoirs are currently at levels above their Drought Watch stages (see Table 1). Below is a summary of large reservoir conditions on April 11, 2012:

- Smith Mountain Lake was at elevation 793.48 ft, approximately 0.48 feet above Drought Watch level. The Drought Watch stage for Smith Mountain Lake is elevation 793 feet and below
- Lake Moomaw on the Jackson River was at 1582.12 feet, and rose 0.02 ft over the preceding 24 hours. The lake was at approximately 100.5% of conservation storage level and 17.12 ft above its Drought Watch level (1565 feet MSL)
- Lake Anna was at elevation 250 ft (2 ft above drought watch). The Drought Watch stage for Lake Anna Lake is elevation 248 feet and below
- Kerr Reservoir was at 302.03 feet, approximately 0.36ft above the Guide Curve for this time period, and was anticipated to drop to 302.00 ft by April 18, 2012. Drought Watch status is reached at greater than 3 ft below the Guide Curve.

Current water levels at Drought Indicator Reservoirs:

Reservoir Name	Date / Time	Reported Elevation (ft msl)	Drought Watch Range (ft msl)	Current Guide Curve Elevation) ft msl)
Smith Mt Lake	April 11 / 0905	793.48	793 – 791.5	
Lake Moomaw	April 11 / 0830	1582.12	1565 – 1562.5	
Lake Anna	April 9 /	250	248 - 246	
Kerr Reservoir	April 11 / 0800	302.03	3 – 6 ft below guide curve	301.67

APPENDIX A
Precipitation Departures by Drought Evaluation Region

PRELIMINARY PRECIPITATION SUMMARY

Prepared: 04/06/12

	DROUGHT REGION	OBSERVED	Mar 1, 2012 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	4.70	4.25	0.45	111%
2	New River	3.84	3.67	0.17	105%
3	Roanoke	4.53	4.27	0.26	106%
4	Upper James	5.19	3.79	1.40	137%
5	Middle James	4.04	4.06	-0.02	99%
6	Shenandoah	3.53	3.20	0.33	110%
7	Northern Virginia	1.78	3.66	-1.88	49%
8	Northern Piedmont	2.82	3.81	-0.99	74%
9	Chowan	2.50	4.37	-1.87	57%
10	Northern Coastal Plain	2.07	4.28	-2.21	48%
11	York-James	2.50	4.69	-2.19	53%
12	Southeast Virginia	3.26	4.20	-0.94	78%
13	Eastern Shore	2.38	4.31	-1.93	55%
	Statewide	3.64	4.04	-0.40	90%

	DROUGHT REGION	OBSERVED	Feb 1, 2012 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	8.45	7.83	0.62	108%
2	New River	6.30	6.60	-0.30	96%
3	Roanoke	6.68	7.58	-0.90	88%
4	Upper James	7.13	6.64	0.49	107%
5	Middle James	6.63	7.18	-0.55	92%
6	Shenandoah	4.88	5.61	-0.73	87%
7	Northern Virginia	3.37	6.33	-2.96	53%
8	Northern Piedmont	4.74	6.78	-2.04	70%
9	Chowan	4.93	7.54	-2.61	65%
10	Northern Coastal Plain	4.29	7.42	-3.13	58%
11	York-James	5.40	8.22	-2.82	66%
12	Southeast Virginia	5.75	7.70	-1.95	75%
13	Eastern Shore	6.04	7.50	-1.46	80%
	Statewide	6.00	7.17	-1.17	84%

	DROUGHT REGION	OBSERVED	Jan 1, 2012 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	11.58	11.56	0.02	100%
2	New River	8.72	9.81	-1.09	89%
3	Roanoke	8.84	11.50	-2.66	77%
4	Upper James	9.85	9.92	-0.07	99%
5	Middle James	8.74	10.84	-2.10	81%
6	Shenandoah	6.48	8.46	-1.98	77%
7	Northern Virginia	5.14	9.61	-4.47	53%
8	Northern Piedmont	6.26	10.30	-4.05	61%

9	Chowan	6.44	11.65	-5.21	55%
10	Northern Coastal Plain	5.73	11.17	-5.44	51%
11	York-James	7.21	12.36	-5.15	58%
12	Southeast Virginia	7.66	11.86	-4.20	65%
13	Eastern Shore	8.32	11.06	-2.74	75%
	Statewide	8.08	10.81	-2.73	75%

	DROUGHT REGION	OBSERVED	Dec 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	16.02	15.20	0.82	105%
2	New River	12.77	12.52	0.25	102%
3	Roanoke	13.19	14.75	-1.56	89%
4	Upper James	14.55	12.87	1.68	113%
5	Middle James	12.69	14.01	-1.32	91%
6	Shenandoah	9.90	11.05	-1.15	90%
7	Northern Virginia	8.74	12.71	-3.97	69%
8	Northern Piedmont	9.94	13.58	-3.65	73%
9	Chowan	8.35	14.67	-6.32	57%
10	Northern Coastal Plain	8.16	14.45	-6.29	56%
11	York-James	8.56	15.75	-7.19	54%
12	Southeast Virginia	9.23	15.04	-5.81	61%
13	Eastern Shore	9.19	14.30	-5.11	64%
	Statewide	11.64	13.93	-2.29	84%

	DROUGHT REGION	OBSERVED	Nov 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	20.87	18.48	2.39	113%
2	New River	17.00	15.55	1.45	109%
3	Roanoke	18.05	18.11	-0.06	100%
4	Upper James	18.31	16.23	2.08	113%
5	Middle James	16.64	17.52	-0.88	95%
6	Shenandoah	12.99	14.10	-1.11	92%
7	Northern Virginia	11.05	16.12	-5.07	69%
8	Northern Piedmont	12.17	17.38	-5.21	70%
9	Chowan	12.64	17.78	-5.14	71%
10	Northern Coastal Plain	11.88	17.59	-5.71	68%
11	York-James	10.81	19.12	-8.31	57%
12	Southeast Virginia	11.73	18.11	-6.38	65%
13	Eastern Shore	11.73	17.24	-5.51	68%
	Statewide	15.46	17.16	-1.70	90%

	DROUGHT REGION	OBSERVED	Oct 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	24.28	21.36	2.92	114%
2	New River	19.98	18.72	1.26	107%
3	Roanoke	21.88	21.82	0.06	100%
4	Upper James	21.76	19.48	2.28	112%
5	Middle James	20.86	21.36	-0.50	98%
6	Shenandoah	16.43	17.29	-0.86	95%
7	Northern Virginia	16.32	19.60	-3.28	83%

8	Northern Piedmont	17.45	21.37	-3.92	82%
9	Chowan	16.43	21.36	-4.93	77%
10	Northern Coastal Plain	15.41	21.10	-5.69	73%
11	York-James	13.77	22.65	-8.88	61%
12	Southeast Virginia	14.15	21.77	-7.62	65%
13	Eastern Shore	14.71	20.45	-5.74	72%
	Statewide	19.24	20.66	-1.42	93%

	DROUGHT REGION	OBSERVED	Sep 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	30.78	24.82	5.96	124%
2	New River	26.50	22.13	4.37	120%
3	Roanoke	28.68	26.05	2.63	110%
4	Upper James	27.19	22.98	4.21	118%
5	Middle James	28.37	25.49	2.88	111%
6	Shenandoah	22.43	20.96	1.47	107%
7	Northern Virginia	24.16	23.67	0.49	102%
8	Northern Piedmont	23.15	25.65	-2.50	90%
9	Chowan	21.69	25.79	-4.10	84%
10	Northern Coastal Plain	24.94	25.19	-0.25	99%
11	York-James	21.17	27.55	-6.38	77%
12	Southeast Virginia	22.32	26.20	-3.88	85%
13	Eastern Shore	18.57	24.06	-5.49	77%
	Statewide	25.97	24.66	1.31	105%

	DROUGHT REGION	OBSERVED	Aug 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	33.64	28.65	4.99	117%
2	New River	28.87	25.44	3.43	113%
3	Roanoke	31.49	29.77	1.72	106%
4	Upper James	30.16	26.31	3.85	115%
5	Middle James	33.90	29.31	4.59	116%
6	Shenandoah	25.98	24.29	1.69	107%
7	Northern Virginia	28.85	27.52	1.33	105%
8	Northern Piedmont	27.47	29.47	-2.00	93%
9	Chowan	31.10	30.10	1.00	103%
10	Northern Coastal Plain	36.82	29.05	7.77	127%
11	York-James	31.96	32.42	-0.46	99%
12	Southeast Virginia	34.71	31.32	3.39	111%
13	Eastern Shore	26.63	27.93	-1.30	95%
	Statewide	31.27	28.49	2.78	110%

	DROUGHT REGION	OBSERVED	Jul 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	38.92	33.13	5.79	117%
2	New River	32.50	29.23	3.27	111%
3	Roanoke	35.07	34.16	0.91	103%
4	Upper James	32.77	30.35	2.42	108%
5	Middle James	38.54	33.72	4.82	114%
6	Shenandoah	28.66	28.05	0.61	102%

7	Northern Virginia	31.44	31.29	0.15	100%
8	Northern Piedmont	29.60	33.87	-4.27	87%
9	Chowan	37.66	34.61	3.05	109%
10	Northern Coastal Plain	40.99	33.50	7.49	122%
11	York-James	41.61	37.52	4.09	111%
12	Southeast Virginia	42.47	36.39	6.08	117%
13	Eastern Shore	30.32	31.93	-1.61	95%
	Statewide	35.49	32.83	2.66	108%

	DROUGHT REGION	OBSERVED	Jun 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	42.05	37.27	4.78	113%
2	New River	34.69	33.08	1.61	105%
3	Roanoke	37.74	38.05	-0.31	99%
4	Upper James	35.17	34.06	1.11	103%
5	Middle James	41.97	37.23	4.74	113%
6	Shenandoah	31.95	31.76	0.19	101%
7	Northern Virginia	33.41	35.15	-1.74	95%
8	Northern Piedmont	32.33	37.88	-5.55	85%
9	Chowan	40.83	38.26	2.57	107%
10	Northern Coastal Plain	44.93	37.06	7.87	121%
11	York-James	47.31	40.93	6.38	116%
12	Southeast Virginia	46.38	40.00	6.38	116%
13	Eastern Shore	36.60	34.91	1.69	105%
	Statewide	38.59	36.62	1.97	105%

	DROUGHT REGION	OBSERVED	May 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	47.39	42.09	5.30	113%
2	New River	40.53	37.29	3.24	109%
3	Roanoke	42.44	42.38	0.06	100%
4	Upper James	40.25	38.34	1.91	105%
5	Middle James	46.40	41.47	4.93	112%
6	Shenandoah	37.38	35.60	1.78	105%
7	Northern Virginia	37.40	39.49	-2.09	95%
8	Northern Piedmont	37.41	42.10	-4.69	89%
9	Chowan	43.56	42.35	1.21	103%
10	Northern Coastal Plain	47.32	41.22	6.10	115%
11	York-James	49.21	45.20	4.01	109%
12	Southeast Virginia	48.83	43.86	4.97	111%
13	Eastern Shore	37.70	38.43	-0.73	98%
	Statewide	42.96	40.88	2.08	105%

	DROUGHT REGION	OBSERVED	Apr 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	53.29	45.85	7.44	116%
2	New River	46.22	40.84	5.38	113%
3	Roanoke	46.93	46.18	0.75	102%
4	Upper James	47.40	41.74	5.66	114%

5	Middle James	50.49	44.81	5.68	113%
6	Shenandoah	44.63	38.52	6.11	116%
7	Northern Virginia	42.64	42.79	-0.15	100%
8	Northern Piedmont	42.91	45.39	-2.48	95%
9	Chowan	45.64	45.78	-0.14	100%
10	Northern Coastal Plain	50.32	44.31	6.01	114%
11	York-James	50.79	48.50	2.29	105%
12	Southeast Virginia	50.47	47.11	3.36	107%
13	Eastern Shore	39.22	41.35	-2.13	95%
	Statewide	47.65	44.30	3.35	108%

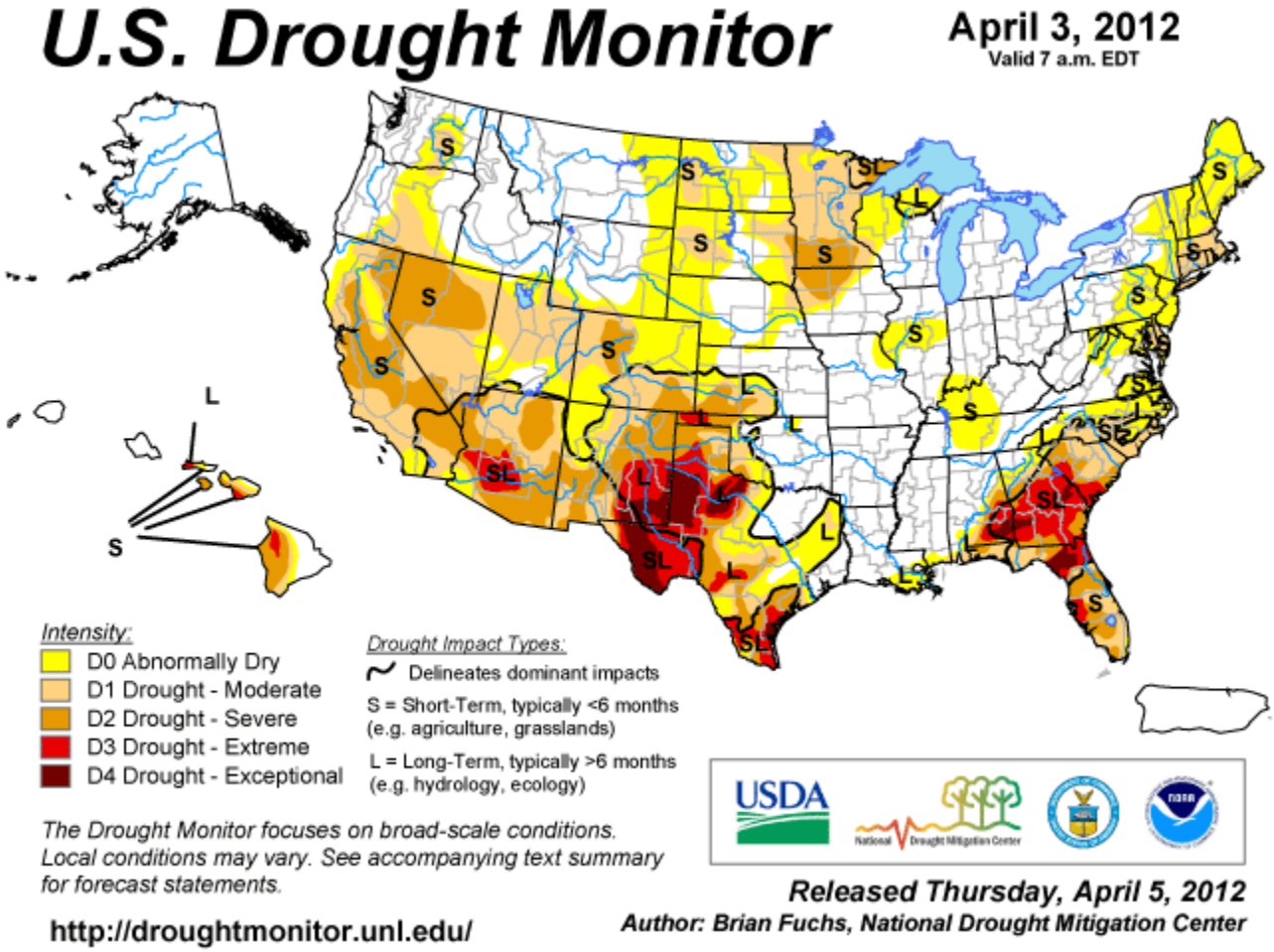
	DROUGHT REGION	OBSERVED	Mar 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	59.96	50.10	9.86	120%
2	New River	52.65	44.51	8.14	118%
3	Roanoke	52.48	50.45	2.03	104%
4	Upper James	52.93	45.53	7.40	116%
5	Middle James	55.84	48.87	6.97	114%
6	Shenandoah	48.96	41.72	7.24	117%
7	Northern Virginia	47.53	46.45	1.08	102%
8	Northern Piedmont	48.42	49.20	-0.78	98%
9	Chowan	49.95	50.15	-0.20	100%
10	Northern Coastal Plain	55.28	48.59	6.69	114%
11	York-James	53.41	53.19	0.22	100%
12	Southeast Virginia	53.86	51.31	2.55	105%
13	Eastern Shore	42.47	45.66	-3.19	93%
	Statewide	52.89	48.34	4.55	109%

	DROUGHT REGION	OBSERVED	Feb 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	62.26	53.68	8.58	116%
2	New River	54.45	47.44	7.01	115%
3	Roanoke	53.97	53.76	0.21	100%
4	Upper James	54.42	48.38	6.04	112%
5	Middle James	57.17	51.99	5.18	110%
6	Shenandoah	50.62	44.13	6.49	115%
7	Northern Virginia	49.42	49.12	0.30	101%
8	Northern Piedmont	49.75	52.17	-2.42	95%
9	Chowan	51.21	53.32	-2.11	96%
10	Northern Coastal Plain	56.45	51.73	4.72	109%
11	York-James	54.68	56.72	-2.04	96%
12	Southeast Virginia	55.48	54.81	0.67	101%
13	Eastern Shore	43.92	48.85	-4.93	90%
	Statewide	54.44	51.47	2.97	106%

	DROUGHT REGION	OBSERVED	Jan 1, 2011 NORMAL	- Mar 31, 2012 DEPARTURE	% OF NORM.
1	Big Sandy	64.04	57.41	6.63	112%
2	New River	55.36	50.65	4.71	109%

3	Roanoke	55.14	57.68	-2.54	96%
4	Upper James	55.33	51.66	3.67	107%
5	Middle James	58.65	55.65	3.00	105%
6	Shenandoah	51.64	46.98	4.66	110%
7	Northern Virginia	51.19	52.40	-1.21	98%
8	Northern Piedmont	51.17	55.69	-4.52	92%
9	Chowan	52.81	57.43	-4.62	92%
10	Northern Coastal Plain	58.44	55.48	2.96	105%
11	York-James	57.22	60.86	-3.64	94%
12	Southeast Virginia	58.56	58.97	-0.41	99%
13	Eastern Shore	46.78	52.41	-5.63	89%
	Statewide	55.94	55.11	0.83	101%

APPENDIX B


U.S. Drought Monitor
April 3, 2012
Valid 7 a.m. EDT
Intensity:
D0 Abnormally Dry
D1 Drought - Moderate
D2 Drought - Severe
D3 Drought - Extreme
D4 Drought - Exceptional
Drought Impact Types:
Delineates dominant impacts
S = Short-Term, typically <6 months (e.g. agriculture, grasslands)
L = Long-Term, typically >6 months (e.g. hydrology, ecology)
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.
http://droughtmonitor.unl.edu/
USDA
Released Thursday, April 5, 2012
Author: Brian Fuchs, National Drought Mitigation Center

APPENDIX C

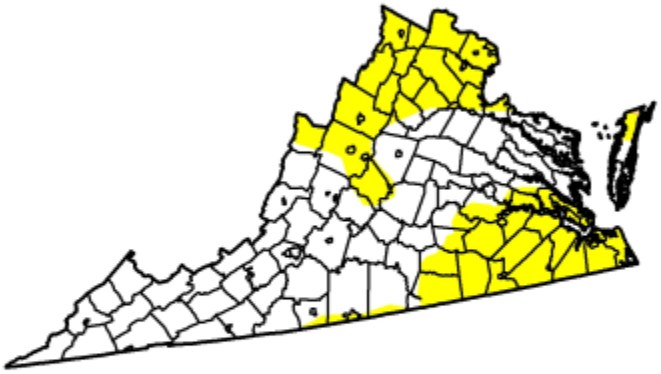
U.S. Drought Monitor

Virginia

April 3, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	63.00	37.00	0.11	0.00	0.00	0.00
Last Week (03/27/2012 map)	65.87	34.13	0.00	0.00	0.00	0.00
3 Months Ago (01/03/2012 map)	95.48	4.52	0.00	0.00	0.00	0.00
Start of Calendar Year (12/27/2011 map)	98.44	1.56	0.00	0.00	0.00	0.00
Start of Water Year (09/27/2011 map)	95.83	4.17	0.00	0.00	0.00	0.00
One Year Ago (03/29/2011 map)	36.74	63.26	30.46	0.00	0.00	0.00



Intensity:

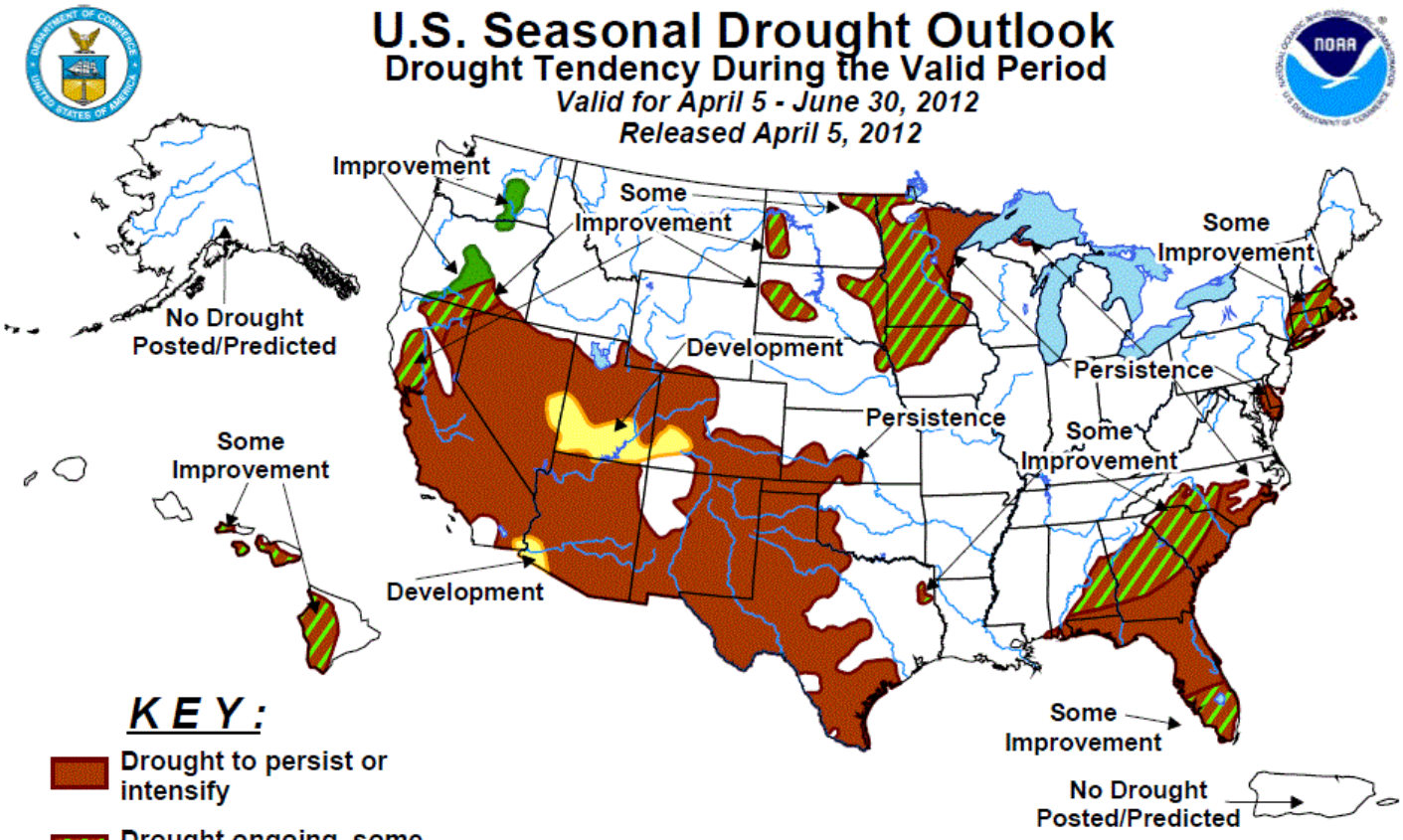
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu

Released Thursday, April 5, 2012
Brian Fuchs, National Drought Mitigation Center

APPENDIX D

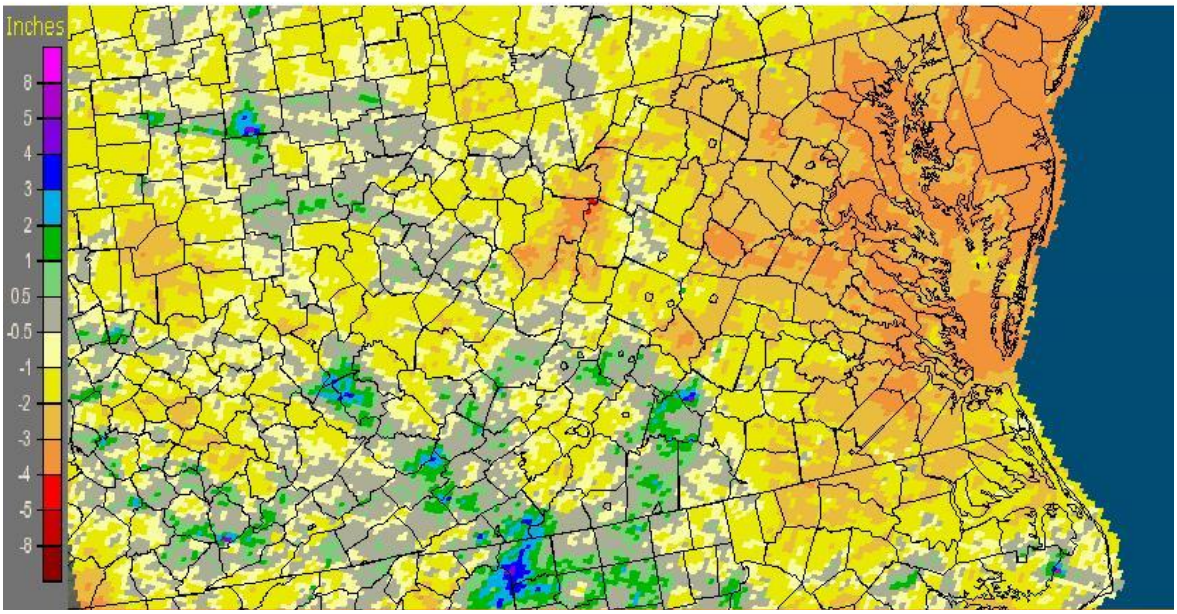


http://www.cpc.ncep.noaa.gov/products/expert_assessment/season_drought.gif

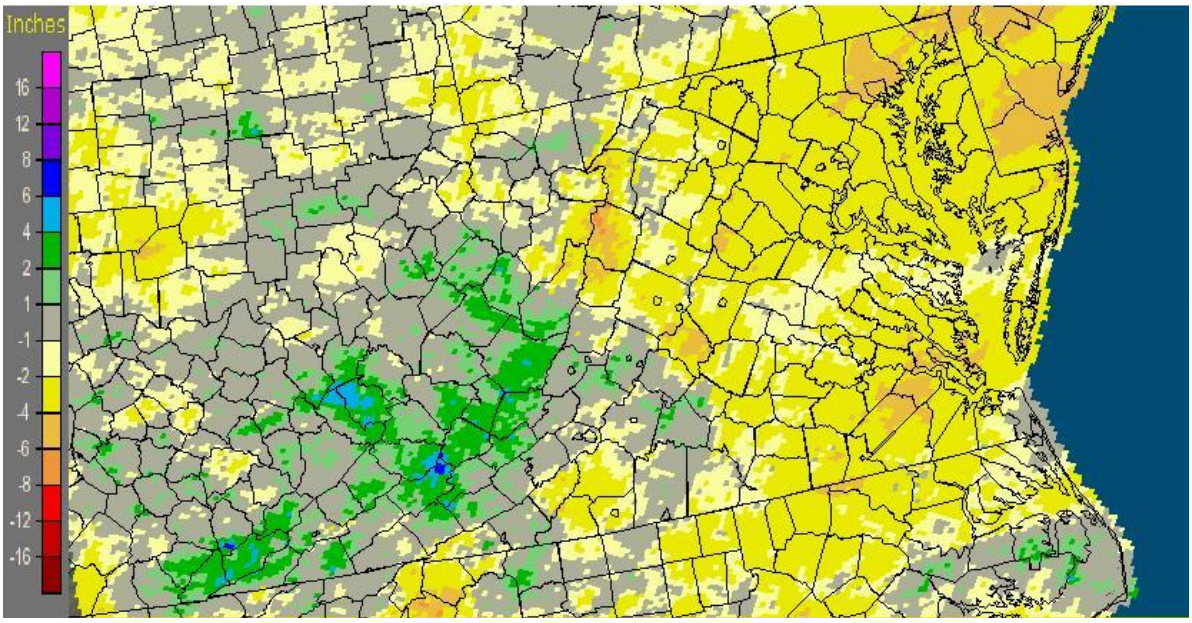
APPENDIX E

30 & 60-Day Departures from Normal Precipitation (accessed from http://water.weather.gov/precip/)

Virginia: Current 30-Day Departure from Normal Precipitation
Valid at 4/10/2012 1200 UTC- Created 4/11/12 0:06 UTC



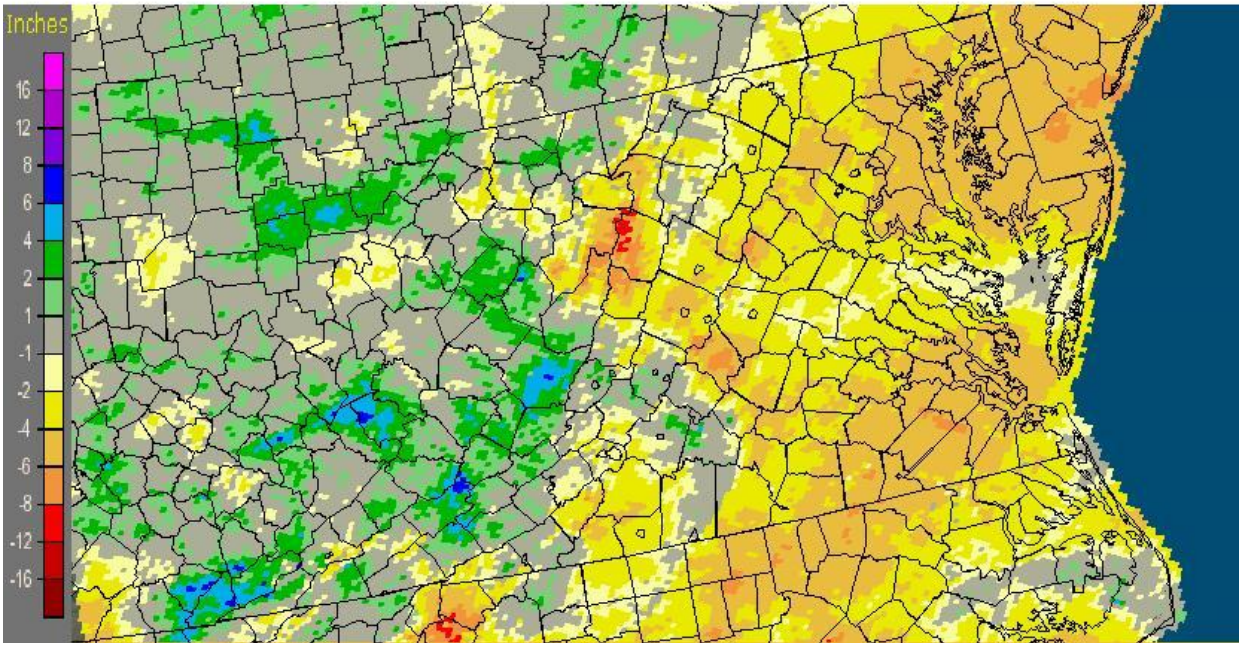
Virginia: Current 60-Day Departure from Normal Precipitation
Valid at 4/10/2012 1200 UTC- Created 4/11/12 0:11 UTC



APPENDIX E (continued)

90-Day and Water-Year Departures from Normal Precipitation (accessed from http://water.weather.gov/precip/)

Virginia: Current 90-Day Departure from Normal Precipitation
Valid at 4/10/2012 1200 UTC- Created 4/11/12 0:16 UTC



Virginia: Current Water-Year (Oct 1) Departure from Normal Precipitation
Valid at 4/10/2012 1200 UTC- Created 4/10/12 23:52 UTC